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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,929	01/02/2001	C. Douglas Haigh	296/1	1238

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EXAMINER

CHEN, TSE W

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 06/09/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

1724

Office Action Summary	Application No. 09/752,929	Applicant(s) HAIGH ET AL.	
	Examiner Tse Chen	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 4,6,10 and 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-9,11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment A dated March 31, 2004.
2. Claims 1-3, 5, 7-9, and 11-12 are presented for examination. Applicants have canceled claims 4, 6, 10, and 13-19.

Claim Objections

3. Claims 3 and 7 are objected to because of the following informalities:
 - As per claim 3, “said at least one driver” should be “said driver” in order to have a corresponding antecedent.
 - As per claim 7, “load an operating system loader *from* a diskless computer *to* a host computer” should be “load an operating system loader *to* a diskless computer *from* a host computer” to comply with page 2, line 22 to page 3, line 23 of disclosure and the other part of the claim that states “obtain the operating system loader *from* said physical storage medium”[medium is operatively coupled to the host computer].

Appropriate correction is required.

Findings

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-3, 5, 7-9, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cronk in view of Aguilar.

6. The rejections are supported by the following fact findings:

7. Cronk et al., U.S. Patent 6532538, hereinafter referred to as Cronk, discloses:

7.1. A computer system [data processing system 100] comprising at least one host computer [server 104] operatively coupled to a physical disk storage medium [disk 120, fig.1].

7.2. The physical disk storage medium being partitioned into a plurality of sections [fig.3; partition 304, 308, 312, etc]¹.

7.3. Each section being associated with and utilized by a different client computer [network computer 108, 110, 112, 302, 306, ...] [col.5, ll.12-17; utilized for accessing the associated operating system].

7.4. At least one of the sections storing an operating system for booting at least one of the client computers [col.5, ll.12-17].

7.5. The host computer including a drive configuration program [utility program] for allocating the plurality of sections [col.5, ll.50-55, ll.61-63].

7.6. The drive configuration program restricting access to each section by the different client computers [col.6, ll.35-43].

7.7. The computer system comprising at least one client computer [network computer 108, 110, or 112] in communication with the host computer [col.3, ll.22-35; network computers obtaining operating system programs from host].

¹ Disk 120 and disk 300 are related in that figure 1 is intended to show the environment in which the embodiment of figure 3 may be implemented. Thus, the partitions illustrated for disk 300 applies to disks 106, 120, and 122.

7.8. Each of a plurality of the sections of said physical disk storage medium stores an operating system for use by a respective one of the client computers [col.5, ll.12-37].

7.9. The client computers are diskless computers [col.3, ll.25-27; col.4, ll.48-52].

7.10. The method comprising the step of installing plural diskless computers within a cabinet to communicate over a common bus [network 102] [col.3, ll.53-61].

7.11. The method wherein the host computer and the diskless computer operate using different operating systems [col.5, ll.14-37; network computers 108, 110, and 112 may use different operating system from server 104].

7.12. The method wherein the host computer and the diskless computer operate using a common operating system [col.2, ll.10-12].

8. Aguilar et al., U.S. Patent 6687819, hereinafter Aguilar, discloses:

8.1. A computer system [data processing system 300] comprising at least one host computer [server 350] operatively coupled to a physical disk storage medium [hard disk 500] partitioned into a plurality of sections [510, 520, 530] with different operating systems [fig.5].

8.2. The computer system comprising at least one client computer [network computers 320, 330, or 340] in communication with the host computer [col.4, ll.33-37].

8.3. The client computer including software [boot code] for causing said client computer, upon initialization, to load said operating system [col.4, ll.66-67; col.5, ll.15-18].

8.4. The software causing said client computer, upon initialization, to boot [col.6, ll.53-56].

8.5. The software causing said client computer, upon initialization, to direct requests for disk access through said host computer [col.4, ll.29-32; col.5, ll.18-20].

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8.6. The software causes said client computer to load a driver [operating system kernel] that directs requests for disk access from said client computer through said host computer [col.7, ll.57-65].

8.7. The software comprises code [boot code] stored in nonvolatile storage [memory 460] for causing a loader [file system descriptor block 120] to load from said physical disk storage medium onto said client computer, and wherein said loader then causes said driver to load onto said client [col.6, ll.1-17; col.7, ll.57-65; boot code on client computer retrieves file system descriptor block 120 in order to be able to load the appropriate kernel].

8.8. The client computer is a diskless computer [col.4, ll.33-34].

8.9. The method comprising the step of loading drivers onto the diskless computer to cause subsequent requests for disk access to be redirected over a bus [network 310] to the host computer [col.7, ll.57-65].

8.10. Aguilar teaches the advantage of a more efficient booting process by employing software that can, upon initialization, load the operating system, boot, and direct requests for disk access through the host computer [col.6, ll.40-56].

Claim Rejections - 35 USC § 103

9. In re claim 1, Cronk discloses each and every limitation of the claim [findings 7.1-7.7], except for the operation details of the network computers. Aguilar teaches a computer system comprising at least one client computer in communication with a host computer operatively coupled to a physical disk storage medium partitioned into a plurality of sections with different operating systems [findings 8.1-8.2], wherein the client computer includes software for causing the client computer, upon initialization, to load the operating system, boot, and direct requests for

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disk access through a host computer [findings 8.3-8.5] in order to provide a more efficient booting process in a network computer setting [finding 8.10]. It would have been obvious to one of ordinary skill in the art, having the teachings of Cronk and Aguilar before him at the time the invention was made, to modify the system taught by Cronk to include the software as taught by Aguilar, in order to obtain a client computer capable of, upon initialization, loading an operating system, booting, and directing requests for disk access through a host computer. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to provide a more efficient booting process in a network computer setting.

10. As to claim 2, see finding 8.6.

11. As to claim 3, see finding 8.7.

12. As to claim 5, see finding 7.8.

13. As to claim 7, see discussion in re claim 1 and findings 8.7-8.8. Cronk and Aguilar teach the system; therefore, Cronk and Aguilar teach the method of operating the system.

14. As to claim 8, see finding 8.9.

15. As to claim 9, see findings 7.9-7.10.

16. As to claim 11, see finding 7.11.

17. As to claim 12, see finding 7.12.

Response to Arguments

18. Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

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19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (703) 305-8580. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen
June 3, 2004


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